

REMARKS

Introduction

Claims 1-18 were originally pending in this case. Claims 1-10 have been withdrawn pursuant to the Examiner's restriction requirements. Claims 11, 13, 14 and 18 have been amended. Thus, Claims 11-18 remain in this application.

Claim Rejections

35 U.S.C. § 112

Claims 11-18 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. In view of the amendments as explained in greater detail below, applicants respectfully submit that informalities noted by the Examiner have been addressed. Accordingly, this rejection is respectfully traversed.

35 U.S.C. § 102 – Anticipation

Claims 11-13 and 15 were rejected under 35 U.S.C. § 102(a) as being anticipated by U.S. patent application publication 2003/0066708 to Allison et al. (the Allison et al. '708 application). Additionally, Claims 11-13 and 15 were rejected under 35 U.S.C. § 102(a) as being anticipated by U.S. patent 4,828,910 to Haussling (the Haussling '910 patent). A claim is said to be anticipated where each and every limitation of the claim can be found in a single reference. Independent claim 11 has been amended to more particularly describe the present invention. Claims 12 - 13 and 15 are ultimately dependent upon independent claim 11. In view of the amendments as explained in greater detail below, applicants respectfully submit that each and every limitation of the independent claims

in this case cannot be found in either the Allison et al. '708 application or the Haussling '910 patent. Accordingly, these rejections are respectfully traversed.

35 U.S.C. § 103 – Obviousness

Claims 11-13, 15, 17 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the known prior art in view of the Haussling '910 patent. Additionally, claims 14 and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the known prior art and the Haussling '910 patent, as applied to claim 11, and further in view of U.S. patent 4,873,045 to Fujita et al. (the Fujita et al. '045 patent). Claims 12-18 are ultimately dependent upon independent claim 11. Independent claim 11 has been amended to more particularly describe the present invention. In view of the amendments as explained in greater detail below, applicants cannot agree with the Examiner that the invention claimed would have been obvious to one of ordinary skill in the art in view of these references. Accordingly, these rejections are respectfully traversed.

The Prior Art

The Allison et al. '708 Application

The Allison et al. '708 application discloses four methods for manufacturing sound attenuating composite articles for use in automotive applications (Illustrated schematically in FIGS. 5A-5D). The four methods disclose manufacturing a composite article that includes at least first layer (12) and second layer (14), while some of the methods disclose a third layer (16) and a fourth layer (18). Specifically, all of the methods disclose providing a first layer of material (12) and extruding thermoplastic material thereon to form a second layer (14), such that the second layer (14) fuses to the first layer (12). The first layer (12) is either an acoustic fiber batting and/or an acoustic foam material constructed from synthetic fibers, natural fibers, and/or blends thereof which serve as

an acoustic absorber. (¶ [0028]). The second layer (14) is a thermoplastic material such as polyethylene, EVA or polypropylene, which acts as an adhesive to join the first layer (12) to the third layer (16). (¶ [0029]).

Only two methods disclosed in the ‘708 application include providing an additional layer (18), which is either a scrim material or a shoddy material. (¶¶ [0032] and [0035]). The first of these two methods (illustrated in FIG. 5A), further includes the steps of compressing the first and second layers (12, 14) via nip rolls; attaching the additional layer (18); compressing all of the layers (12, 14, 16 and 18) via nip rolls; and then placing the composite article (10) into a heated mold for additional compression. (¶¶ [0053] – [0056]). The other method (illustrated in FIG. 5D) further includes the steps of compressing the first layer (12), second layer (14) and additional layer (18) via nip rolls and then placing the composite article (310) into a heated mold for additional compression. (¶¶ [0062] – [0064]).

The Allison et al. ‘708 application does not disclose or suggest a method of manufacturing a composite shoddy for use as underlayment for a surface material in automotive applications that includes providing an organic base material that defines a shoddy bottom layer and a scrim material that defines a scrim top layer. Furthermore, the Allison et al. ‘708 application does not disclose or suggest the step of providing a mastic material that defines a mastic middle layer wherein the shoddy bottom layer and the scrim top layer are bonded to opposite sides of the mastic middle layer, as described in independent claim 11, as amended.

The Haussling ‘910 Patent

The Haussling ‘910 patent discloses a sound absorbing laminate (10) for use as an automobile headliner and method of making the same. More specifically, the ‘910 patent discloses a method wherein a nonwoven fibrous batt (3) is fed between fibrous reinforcing mats (2 and 4).

Preferably, the batt (3) includes a binder resin that is still wet to effect temporary adhesion with the mats (2 and 4). After a predetermined drying time, the exposed exterior surfaces of each mat (2 and 4) are coated with a polymerizable polyurethane elastomer, which impregnates the mats (2 and 4), including their interface with the batt (3). While the elastomer remains uncured, a decorative cover layer 1 is applied to the exterior surface of the mat (2) and a release layer is applied to the exterior surface of the mat (4) to form the laminate (10). Subsequently, the laminate (10) is preferably passed through a set of rollers and then introduced into a heated mold that has a predetermined geometrical configuration to produce the shape of configured part 20 (FIG. 2).

However, the Haussling '910 patent does not disclose or suggest a method of manufacturing a composite shoddy for use as underlayment for a surface material in automotive applications that includes providing an organic base material that defines a shoddy bottom layer and a scrim material that defines a scrim top layer. Furthermore, the Haussling '910 patent does not disclose or suggest a method that includes the step of operatively engaging the B-side of a non-carpeted surface material to the scrim top layer, as described in independent claim 11, as amended.

The Fujita et al. '045 Patent.

The Fujita et al. '045 patent discloses a method for manufacturing an automotive interior component such as a door trim, rear side trim, or rear parcel shelf. The method includes providing a skin layer (50) consisting of cloth, non-woven fabric having a cushioning layer (51) within a mold (40) such that the cushioning layer (51) does not contact the mold surface (42a) (FIG. 2). A mixture of polyolefin resin and wood powder filler is then extruded onto another mold surface (41a) to form a semi-molten sheet material, which serves as the core layer (52). The mold (40) is clamped to press form the core layer (52) into a predetermined shape and integrally bond the skin layer (50) to the core layer (52), such that the cushion layer (51) is interposed therebetween, thereby forming a door trim

(53) (FIG. 4). The '045 patent further discloses that the cushioning layer (51) of the skin layer (50) serves as a barrier to prevent infiltration of the core layer (52) to the external surface and contributes to the elimination of the surface irregularities of the skin layer 50, thereby improving the appearance and the feel of the surface of the product (53).

However, the Fujita et al. '045 patent does not disclose or suggest a method of manufacturing a composite shoddy for use as underlayment for a surface material in automotive applications that includes providing an organic base material that defines a shoddy bottom layer and a scrim material that defines a scrim top layer. Furthermore, the Fujita et al. '045 patent does not disclose or suggest the step of providing a mastic material that defines a mastic middle layer wherein the shoddy bottom layer and the scrim top layer are bonded to opposite sides of the mastic middle layer, as described in independent claim 11, as amended.

The Present Invention

In contrast to that which is disclosed in the references of record in this case, the present invention as defined in independent claim 11 is directed toward a method of manufacturing a composite shoddy for use as underlayment for a surface material in automotive applications. The method includes providing an organic base material that defines a shoddy bottom layer of the composite shoddy. The organic bottom layer includes an engaging surface. The method further includes providing a mastic material that defines a mastic middle layer having a first surface and a second surface opposite the first surface. The engaging surface of the shoddy bottom layer is then bonded to the first surface of the mastic middle layer. The method further includes the step of providing a scrim material that defines a scrim top layer having a mastic contact surface and a receiving surface opposite the mastic contact surface wherein the receiving surface is adapted to

operatively engage a non-carpeted surface material for use in automotive applications. Subsequently, the second surface of the mastic middle layer is then bonded to the mastic contact surface of the scrim top layer to thereby form a composite shoddy.

Argument

35 U.S.C. § 112

Claims 11-18 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Applicants respectfully traverse this rejection. Here, applicants respectfully submit that the expression “mastic” as used in the present application is not indefinite. This expression has been used in prior patents in the related art. (See, e.g., U.S. Patent No. 4,456,705.) In addition, the expression “mastic” as used in the claims must be interpreted in light of the specification. Paragraph [0022] states, “The middle layer 42 is constructed from a mastic material having a primarily bituminous substance. The mastic middle layer 42 has a predetermined density greater than the density of the organic bottom layer 38 and provides vibration dampening to improve vehicle interior acoustics as well as to block exterior noise from entering the vehicle interior 14 through the organic bottom layer 38.” Thus, it is respectfully submitted that the expression “mastic” has been adequately described in the specification and is not indefinite.

Claims 11-18 are also rejected 35 U.S.C. § 112, second paragraph, because it is unclear whether the product (a composite shoddy) of the claim is required to have shoddy (the material) in it. Applicants respectfully traverse this rejection. Paragraph [0021] of the present application defines the bottom layer as an organic material including a fibrous material, such as cotton or wool, which may be resinated and/or needled to provide a suitable bottom layer for the composite shoddy. The

term “composite,” is used as an adjective and refers to something which is made up of distinct components. Here, composite modifies the term “shoddy,” which applicants defined as a flexible sheet of material for use as a substrate under a surface material. (¶ [0003]). However, in the spirit of compromise, claims 11, 13 and 14 have been amended to refer, broadly, to a “shoddy bottom layer.”

Accordingly, applicants respectfully submit that claims 11-18, as amended, distinctly point out the components used in each step that make up a flexible sheet of material for use as a substrate under a surface material. For these reasons, applicants respectfully submit that the present application complies in all respects with the requirements of § 112.

35 U.S.C. § 102

Claims 11-13 and 15 were rejected under 35 U.S.C. § 102(a) as being anticipated by the Allison et al. ‘708 application and further rejected these claims under § 102(a) as being anticipated by the Haussling ‘910 patent. Applicants respectfully submit that the method of manufacturing a composite shoddy defined in claims 11-13 and 15 is not disclosed or suggested by either the Allison et al. ‘708 application or the Haussling ‘910 patent. The Allison et al. ‘708 application discloses providing either a scrim or a shoddy and compressing the scrim or shoddy and thermoplastic layers together to facilitate bonding therebetween. The Haussling ‘910 patent discloses providing a fibrous core sandwiched between two, non-extendable, fibrous reinforcing mats methods. Furthermore, the Haussling ‘910 patent discloses that the scrim layer is disposed furthest away from the B-side of the surface material.

Neither the Allison et al. ‘708 application nor the Haussling ‘910 patent disclose or suggest a method of manufacturing a tri-partite composite shoddy including the steps of providing a shoddy bottom layer and a scrim top layer that are bonded to opposite sides of a mastic middle layer. Furthermore, neither the Allison et al. ‘708 application nor the Haussling ‘910 patent disclose or

suggest the steps of providing a scrim top layer that is adapted to operatively engage a non-carpeted surface material for use in automotive applications and bonding the scrim top layer to the mastic middle layer, as required in independent claim 11, as amended.

Accordingly, applicants respectfully submit that the structure required by newly amended independent claim 11 as discussed above cannot be found in either the Allison et al. '708 application or the Haussling '910 patent. Claims 12-18 are each ultimately dependent upon independent claim 11. In view of the amendments made to the claims presently pending in this case, it is respectfully submitted that the disclosures of the Allison et al. '708 application and the Haussling '910 patent do not anticipate the invention as defined in these claims. For these reasons, applicants respectfully request that the rejection under § 102 be withdrawn.

35 U.S.C. § 103

Claims 11-13, 15, 17 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the known prior art in view of the Haussling '910 patent. The Examiner also rejected dependent claims 14 and 16 under 35 U.S.C. § 103(a) as being unpatentable over the known prior art and Haussling '910 patent, as applied to claim 11, and further in view of the Fujita et al. '045 patent.

A rejection based on §103 must rest on a factual basis, with the facts being interpreted without hindsight reconstruction of the present invention from the prior art. Furthermore, obviousness is not established by combining the basic disclosures of the prior art to produce the claimed invention absent a teaching or suggestion that the combination be made. Interconnect Planning Corp. v. Fiel, 774 F.2d 1132, 1143, 227 U.S.P.Q. (BNA) 543, 551 (Fed. Cir. 1985); In re Corkhill, 771 F.2d 1496, 1501-02, 226 U.S.P.Q. (BNA) 1005, 1009-10 (Fed. Cir. 1985). The test for combining references is what the combination of disclosures, taken as a whole, would have

suggested to one of ordinary skill in the art. In re Simon, 174 U.S.P.Q. (BNA) 114 (CCPA 1972).

The Court of Appeals for the Federal Circuit has stated that:

To properly combine references A and B to reach the conclusion that the subject matter of a patent would have been obvious, case law requires that there must have been some teaching, suggestion, or inference in either reference A or B, or both, or knowledge generally available to one of ordinary skill in the relevant art, which would have led one skilled in the art to combine the relevant teachings of reference A and B. Ashland Oil Inc. v. Delta Resins and Refractories, 776 F.2d 281, 297, n24 (Fed. Cir. 1989).

Thus, it is not sufficient for an examiner merely to state that one cited reference teaches several of the limitations of a claim and another teaches several other limitations of a claim to support a rejection based on obviousness. This approach ignores a cornerstone principal of patent law:

That all elements of an invention may have been old (the normal situation), or some old and some new, or all new, is however, simply irrelevant. Virtually all inventions are combinations and virtually all are combinations of old elements. Environmental Designs v. Union Oil Co. of Cal., 713 F.2d 693, 698 (Fed. Cir. 1983) (other citations omitted).

A patentable invention ... may result even if the inventor has, in effect, merely combined features, old in the art, for their known purpose without producing anything beyond the results inherent in their use. American Hoist & Derek Co. v. Sowa & Sons, Inc., 220 U.S.P.Q. (BNA) 763, 771 (Fed. Cir. 1984) (emphasis in original, other citations omitted).

As the Court of Appeals for the Federal Circuit has noted in the past, “[w]hen a rejection depends upon a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references.” Ecolchem, Inc. v. Southern Calif. Edison, 56 U.S.P.Q. 2d 1065, 1073 (Fed. Cir. 2000). Specifically, the Examiner must show that a person of ordinary skill in the art must not only have had some motivation to combine the prior art teachings, but some

motivation to combine the prior art teachings *in the particular manner claimed*. In re Kotzab, 217 F.3d 1365, 1371 (Fed. Cir. 2000) (emphasis added).

Here, there is simply no motivation to combine the known prior art with the Haussling ‘910 patent. Moreover, there is no motivation to combine these prior art references in the manner claimed by the present invention. Even assuming that such a motivation existed, a combination of these references would not result in the method of manufacturing a composite shoddy of the type described in independent claim 11, as amended.

Rather, the known prior art and the Haussling ‘910 patent skirt around, but do not suggest the claimed invention *as a whole*. See Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1383 (Fed. Cir. 1986). Specifically, the known prior art discloses a method of manufacturing a composite shoddy that includes providing a *mastic layer* bound to a shoddy layer and providing a *removable* release liner to prevent adhesion among composite shoddies that are stacked for inventory. The known prior art further discloses placing the shoddy layer of the composite shoddy into contact with the B-side of a non-carpeted surface material. On the other hand, the Haussling ‘910 patent *teaches away* from the known prior art by advocating a method of manufacturing a laminate material that *does not include a mastic layer* and provides a scrim material that is *fixed* to the laminate to facilitate easy removal from the mold. The Haussling ‘910 patent further teaches away from the known prior art by advocating that the fibrous reinforcing mat should contact the surface material. Indeed, the Haussling ‘910 patent teaches that the scrim material is the component furthest away from the surface material. The Haussling ‘910 method is entirely contrary to the known prior art discussed in the present application. Accordingly, the teachings of the known prior art and the Haussling ‘910 patent are diametrically opposed and would have to be reconstructed or rearranged to change their operations if they were to be combined.

There is a fundamental axiom in patent law that if a reference must be reconstructed or rearranged to change its operation to meet the applicant's claim, that modification of the reference is inappropriate and cannot stand. It is respectfully submitted that the Examiner is picking and choosing elements from the dissimilar methods disclosed in the known prior art and the Haussling '910 patent and combining these elements by restructuring them, using hindsight and the applicants' own disclosure, to conclude that the claimed invention is obvious.

Neither the known prior art nor the Haussling '910 patent teach or suggest a method of manufacturing a composite shoddy including the steps of providing a shoddy bottom layer, a mastic middle layer and a scrim top layer where the shoddy bottom layer and the scrim top layer are bound to opposite sides of the mastic middle layer. Likewise, the known prior art and the Haussling '910 patent do not teach or suggest this method where the scrim top layer is adapted to operatively engage the B-side of a non-carpeted surface material for use in automotive applications, as required independent claim 11, as amended. The known prior art fails to disclose or suggest any structure which can serve as the scrim top layer in the manner required by the claims in this case and Haussling merely discloses a method that is different from the present invention as Haussling does not include a mastic layer and teaches a scrim bottom layer.

Furthermore, none of these references relied upon the Examiner has anything to do with the problems solved by the present invention as discussed in greater detail in Pages 1-4 of applicants' specification. Specifically, neither the known prior art nor the Haussling '910 patent teach or suggest the a method of manufacturing a composite shoddy that eliminates the need for a release liner; accommodates for post-processing material shrinkage when secured to non-carpeted surface material; and enables in-mold bonding to the B-side of a surface material. Thus, applicants

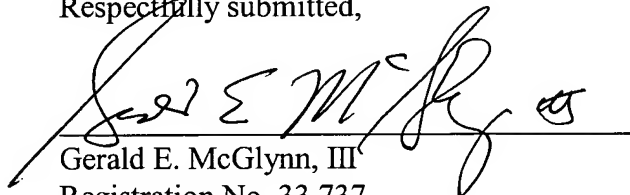
respectfully submit that the disclosures of each of these references would have to be improperly modified to meet the limitations of independent claim 11.

Claims 12-18 are ultimately dependent upon independent claim 11 and add further perfecting limitations which cannot be found in, nor are they suggested by, the Fujita et al. '045 patent or the remaining prior art references. However, even if they did, they could only be applied through hindsight after restructuring the disclosure of the prior art in view of applicants' invention. A combination of the prior art in this way to derive applicants' invention would, in and of itself, be an invention.

Conclusion

Thus, it is respectfully submitted that the objections to claims 11-18 have been overcome. It is further respectfully submitted that claims 11-18 are patentably distinguishable over the prior art of record. Allowance of claims 11-18 is respectfully solicited.

Respectfully submitted,



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